Children's Environmental Health

9. Hepatitis A Rates in Kentucky
10. Cryptosporidiosis Cases in Kentucky

Waterborne Diseases

In the United States, the drinking water and food supply is generally safe, yet diseases that spread through water and food are still a very real threat. The consequences of consuming food or water contaminated with pathogens can include gastrointestinal illnesses that cause stomach pain, diarrhea, headache, vomiting and fever. A drinking water outbreak of Cryptosporidiosis, a diarrheal disease caused by a microscopic parasite, *Cryptosporidium parvum*, in Milwaukee, Wisconsin in 1993 sickened about 400,000 people and killed more than 50, most of whom had weakened immune systems.

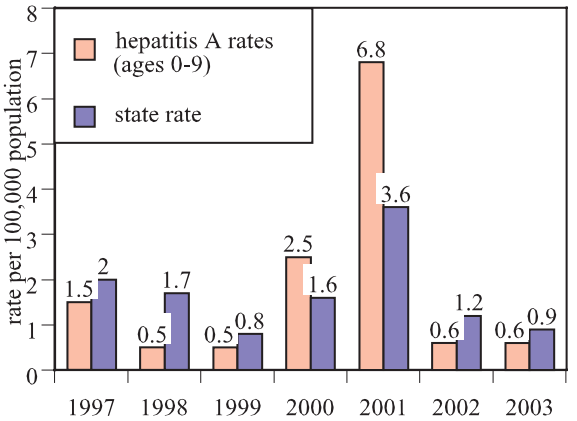
The number of deaths attributed to microorganism-induced gastrointestinal illnesses recently increased in the U.S. after decades of relatively stable rates. The increases were particularly dramatic in young children (less than six years of age) and older Americans (more than 65 years of age).[1] However, many cases of gastrointestinal illnesses go unreported or are not diagnosed making it difficult to estimate the number of people affected every year.[2]

The national Notifiable Disease Program tracks seven gastrointestinal illnesses caused by microorganisms or parasites: Cholera, Cryptosporidiosis, *E. coli* O157:H7, Hepatitis A, Salmonellosis, Shigellosis and Typhoid Fever. These illnesses are transmitted primarily by water or food contaminated with feces or by personal contact with an infected person or animal.

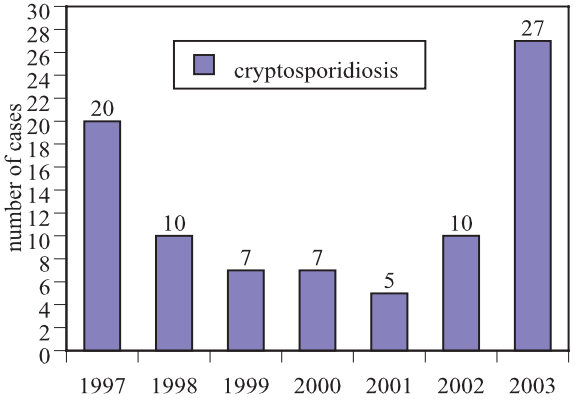
An estimated 900,000 people in the United States become ill each year from drinking contaminated water, according to the Centers for Disease Control and Prevention (CDC). During the past two decades, the parasite *Cryptosporidium parvum* has become recognized as one of the most common causes of waterborne diseases (drinking and recreational) in humans. Kentucky documented 86 cases of Cryptosporidiosis in the past 7 years. In 1999, six of the seven cases reported in Kentucky were in children under the age of 14.

The last known waterborne disease outbreak in Kentucky occurred in Meade County in 1982 when 73 people contracted hepatitis A from a spring used for household water. According to the CDC, a quarter of a million people in the U.S. may become infected with hepatitis A every year and the majority of these cases may occur in children under the age of 10. Although hepatitis A is primarily a childhood disease, it tends to be more serious in adults. Younger children may have an infection without any symptoms, but they can still be contagious to others. Hepatitis A is a liver-infecting virus that can be spread through contaminated food and water. It is rarely fatal and most often causes jaundice and flu-like symptoms that can persist for weeks. The rate of hepatitis A in the U.S. declined 62 percent (from 11.7 to 4.4 per 100,000 population) between 1996 and 2001 due to the introduction of a vaccine in 1995. In Kentucky, hepatitis A rates have been below the national average. An outbreak of hepatitis A in Warren County during 2001, which infected 79 people, increased the state rate to its highest level in a 6 year period. The community-wide outbreak was first documented in a five year old and was attributed to poor sanitary conditions. The CDC recommends children living in areas with elevated rates of hepatitis A be vaccinated.

Indicator 9. Hepatitis A Rates in Kentucky[endnote]



Indicator 10. Cryptosporidiosis Cases in Kentucky[endnote]



CD- Table 11. ***Hepatitis A and Cryptosporidiosis cases*** *by county.*